PPI Node

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PPI Node Report Overview

- Mission Status

- PDS4 Migration

- Software

- PPI Staff Time Commitments

Mission Status: Overview

Active

- Pipeline: Cassini, LRO, ***MESSENGER***, MEX, MSL
- Peer Review: ***MAVEN***, ***MESSENGER***, MSL
- Cruise: Juno, ***MAVEN***

Planning

- Preliminary: InSight

Restoration

- Pipeline: MGS, ***Voyager***
- Design: ***ARTEMIS***

Support

- Peer Review: Dawn, New Horizons, Rosetta

Mission Status: Active

MAVEN

- SIS status: 11 signed; 1 draft; 1 delayed
- Preliminary peer reviews have begun
  - 3 in lien resolution; 6 in review; 2 in prep; 1 delayed

MESSENGER

- EPPS
  - FIPS – new advanced product in peer review

Mission Status: Active

MSL

- RAD
  - EDR – liens resolved; review closed
  - RDR – in lien resolution

Cassini

- High order archive status
  - CAPS – 3 data sets delivered; need review
  - INMS – 2 data sets under design;
  - MAG – 3 data sets delivered; need PDS metadata
  - MIMI – 3 data sets certified; in production
  - RPWS – 1 data set delivered; 1 in prep

Mission Status: Support

Dawn

- FC
  - pre-Vesta L-1A & L-1B volumes – certified with liens (in lien resolution)
  - Vesta high-order products – no progress
- GRaND
  - Vesta L-1B volume – in production
- Gravity
  - Vesta L-0 volume – reviewed; in lien resolution
  - Vesta L-2 (Gaskell Shape Model) – negotiating contract
- VIR
  - Vesta L-1A & L-1B – liens resolved; archived
  - pre-Vesta L-1A & L-1B – data delivered to DSC (UCLA)
  - Vesta high-order products – production to start Sep 2014

Mission Status: Restorations

ARTEMIS

- Archive generation work has begun
  - Generated as IM 1.2.0.0
    - Context products
    - Bundle/collection products
    - Document products
  - Generated as IM 1.2.0.1
    - FGM L2 data labels

PDS4 Migration Status

- PPI has migrated products from the following spacecraft: *MESSENGER*, MEX, MGS, Odyssey, *Voyagers 1 & 2*

Bundles	**30**
Mission & Instrument	18
Data	12
Collections	**134**
Data	19
Document	90
Calibration	19
Browse	0
"Geometry" (Document)	6

- Continued development and documentation of PPI PDS4 policies

PDS4 Migration Issues

- Node migration coordination – migration priorities vary from node to node
  - Mission dictionary development
  - Mission bundle – includes products used across the mission (mission description documents, instrument documents, etc.)
- Product migration version consistency
  - Migration effort will span multiple IM versions
  - Migrated products could be of different IM versions
  - Need continued support for past versions of the IM
    - Support for deprecated structures (e.g. Product_Document)
    - Full functionality for deprecated structures

PPI Software and Services

- Webpages
  - Improved flow, rendering, searching
  - Image Gallery
  - Mission pages (early draft)
- Services
  - Format conversion (VOTable, CSV for Tables)
  - Visualization (connect to Autoplot and Topcat)
- Data Provider Support
  - igpp.docgen (Velocity processor)
  - pds.cdf (Requirement checks, metadata access)

Staff PDS4 Time Commitments

CCB   **5% FTE**

    General (telecon, etc.)   1% FTE

    SCRs   4% FTE

DDWG   **30% FTE**

    General (telecon, etc.)   10% FTE

    Metadata Consistency WG   10% FTE

    Notes   10% FTE

Software Development   105% FTE

    Data Provider Tools   15% FTE

    Web Services   90% FTE

BACKUP SLIDES

MAVEN Archive Status

Archive	SIS	Preliminary Review
IUVS	Signed	In Review
NGIMS	Signed	Lien Resolution[1]
EUV	Signed	Lien Resolution
LPW	Signed	Lien Resolution
MAG	Draft	In Preparation
SEP	Signed	In Review
STATIC	Signed	In Review
SWEA	Signed	In Review
SWIA	Signed	In Review
ACC	Signed	N/A
Ancillary	Signed	In Preparation
In Situ KP	Signed	In Review
Raw TLM	Delayed	Delayed
SPICE	N/A	N/A

[1] LADEE NMS liens will be applied to NMGIMS products; a separate NGIMS review will follow

Cassini High Order Status

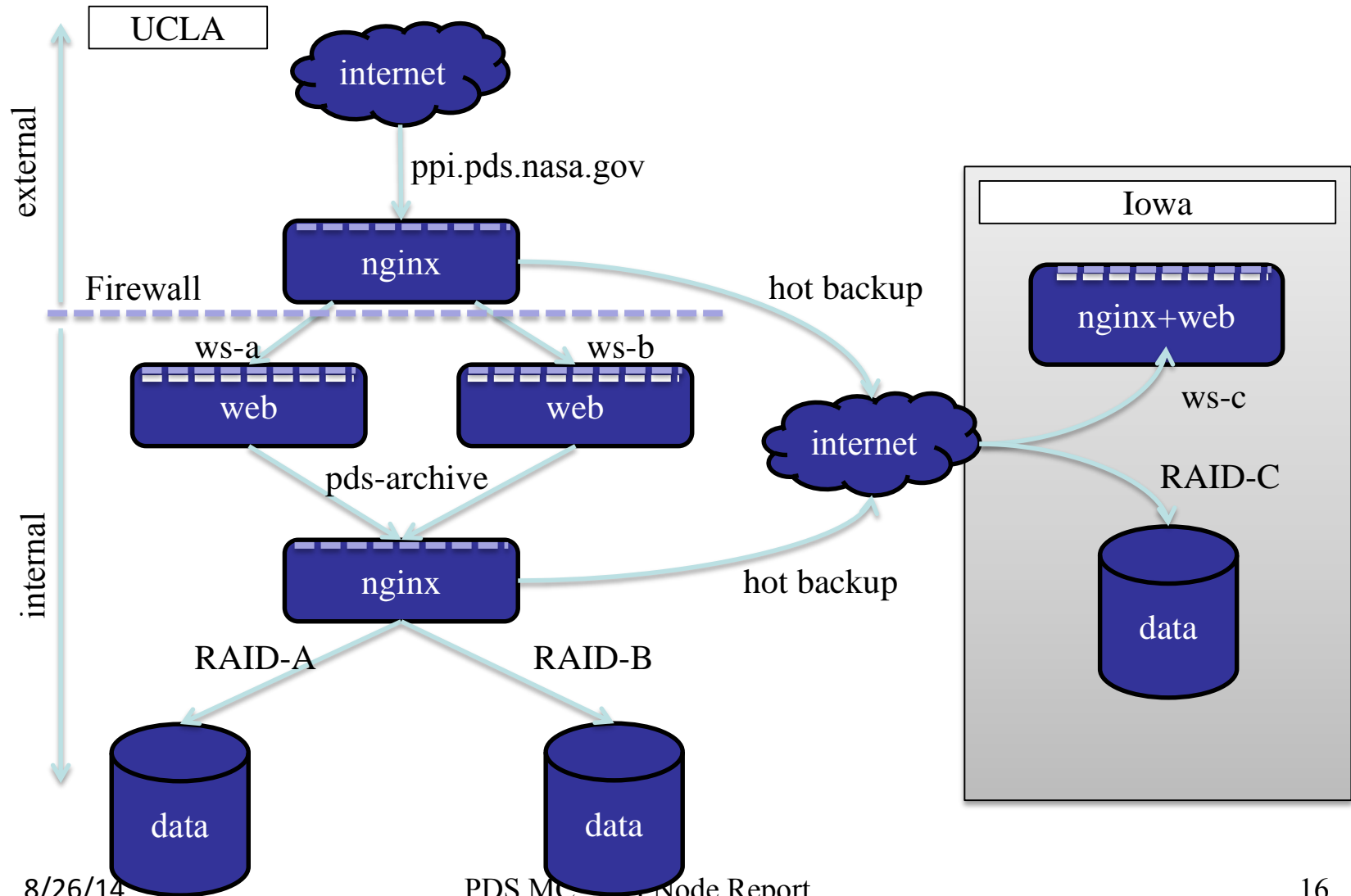| Instrument	Product	Status
CAPS	Electron Moments	Delivered; need review
	Ion Moments	Delivered; need review
	Spacecraft Potential	Delivered; need review
INMS	Neutral Species Densities	In design
	Ion Species Densities	In design
MAG	Orbital Trajectories	Delivered; need PDS metadata
	Satellite Flyby Trajectories	Delivered; need PDS metadata
	B-Field line footprints	Delivered; need PDS metadata
MIMI	CHEMS Calibrated Data	Certified; In production
	INCA Calibrated Data	Certified; In production
	LEMMS Calibrated Data	Certified; In production
RPWS	LP Sweep Derived Plasma Parameters	Delivered; need review
	HFR Derived Quasi-Thermal Noise Spectroscopy	In production

Mission Status: Restorations

ARTEMIS Archive Plan

Archive will support lunar data analysis

- 2 spacecraft: 5 instruments, 2 pseudo-instruments

- *94,861 products (675.4 GB); 88* collections; *20* bundles (level-1 and level-2 data)

- Data will be archived under PDS4 IM version 1.2.0.1

- ARTEMIS data are in CDF format

- Archive generation performed as an "active" restoration

PPI Archive Architecture

PDS MC – PPI Node Report

PDS4 Tool Descriptions (1/3)

Tool	Description	Developer
AMDA	Web space physics visualization tool	CDPP
Autoplot	Web visualization tool for numerous data types (including VO Table)	Cottage
CDF to ASCII table/ PDS labeled to CDF	Transforms PDS labeled CDF to PDS labeled ASCII tables and viseversa	UCLA
cdfconvert	Converts a CDF file's CDF library version compliance and format	GSFC
cdfdump	Dumps the data and/or metadata of a CDF file in a readable form	GSFC
ditdos/write	Performs data format transformations: PDS labeled table to VO Table	UCLA
Generate Tool	Generates PDS4 labels from either a PDS3 label or PDS3-specific Document Object Model (DOM) object	JPL

PDS4 Tool Descriptions (2/3)

Tool	Description	Developer
Harvest Tool	Collects metadata from PDS4 product labels for the Registry Service and Search Tool	JPL
igpp.docgen	Populates an Apache Velocity template using metadata scanned from an PDS label, XML, or CDF file producing a PDS label, XML, or plain text file	UCLA
oXygen, etc.	XML editor and debugger	COTS
pds.cdf.CDF	Reads and returns CDF metadata	UCLA
pds.cdf.Check	Reads a CDF file and verifies conformance with the PDS archive requirements for CDF	UCLA
Registry Service	Software for tracking, auditing, locating, and maintaining artifacts within the system	JPL
PDS4 Tools	PDS4 object access, and transformation tool	ARC

PDS4 Tool Descriptions (3/3)

Tool	Description	Developer
Search Tool	Performs product searches based upon databases created by the Harvest Tool	JPL
Table display	Reads and displays a PDS4 labeled table	ARC
TOPCAT	Web visualization tool for numerous data types (including FITS, VO Table, and CDF)	CNES
Transform Tool	Transforms PDS3 and PDS4 product labels and product data into common formats	JPL
Validate Tool	Validates PDS4 product labels and product data	JPL
Web SPLASH	Web visualization tool for PDS labeled data	UCLA
XML generation/ transformation tool	Generates a PDS4 label from	NMSU